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# United States Department of Agriculture,

BUREAU OF ANIMAL INDUSTRY—Circular No. 40.

DAIRY DIVISION—No. 47.

## OFFICIALS, ASSOCIATIONS, AND EDUCATIONAL INSTITUTIONS CONNECTED WITH THE DAIRY INTERESTS OF THE UNITED STATES FOR THE YEAR 1903.

WASHINGTON, D. C., *March 25, 1903.*

In order to meet numerous inquiries made of this Department, as well as to show the extent to which the dairy interests of the United States are organized, some of the officials employed in connection with this industry, and the facilities offered for technical instruction, the accompanying lists have been prepared.

HENRY E. ALVORD,  
*Chief of Dairy Division.*

Approved:

JAMES WILSON,  
*Secretary of Agriculture.*

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### UNITED STATES DEPARTMENT OF AGRICULTURE, 1903.

Secretary, JAMES WILSON.

Assistant Secretary, J. H. BRIGHAM.

Bureau of Animal Industry:

Chief, D. E. SALMON.

Assistant Chief, A. D. MELVIN.

Dairy Division:

Chief, HENRY E. ALVORD.

Assistant Chief, HARRY HAYWARD.

*Dairy Inspectors.*

W. D. COLLYER, Illinois.

JAMES HEWES, Maryland.

M. W. LANG, Ohio.

E. A. McDONALD, Washington.

WM. E. SMITH, New Jersey.

B. F. VAN VALKENBURGH, New York.

E. H. WEBSTER, Kansas.

LEVI WELLS, Pennsylvania.

G. M. WHITAKER, Massachusetts.

W. H. SAYLOR (Acting), California.

## STATE DAIRY OFFICIALS, 1903.

The State laws under which the dairy commissioners' and dairy and food commissioners' offices are created, and those especially relating to dairy matters, were compiled and published by the Dairy Division in 1898 (Dairy No. 21) and in 1900 (Dairy No. 34). Many laws for the protection of dairy products, passed by State legislatures, are inoperative. In some cases courts have failed to sustain the statutes; in others the nonenforcement is due to neglect to provide the necessary special officers and funds. The cost of enforcing the laws referred to varies greatly in the different States. This information can not be exactly obtained, as it is the custom to make but one appropriation for dairy and other food work, and expenditures for the former are not kept separately. In some cases the amounts used in the interest of pure dairy products reach \$10,000 per year, and this amount is far exceeded in two or three States. The salary of the executive officer rarely exceeds \$2,000.

The following is a list of the commissioners and other principal officers:

- CALIFORNIA.** Agent and secretary of the State dairy bureau, J. M. Thomas, San Francisco. Assistant agent, William H. Saylor, 114 California street, San Francisco.
- COLORADO.** State dairy commissioner, T. L. Monson, Denver. Deputy commissioner, B. S. Newland.
- CONNECTICUT.** Dairy commissioner, J. B. Noble, Hartford. Deputy commissioner, R. O. Eaton, Montowese.
- ILLINOIS.** State food commissioner, Alfred H. Jones, Room 1623, Manhattan Building, Chicago. Assistant commissioner, Rudolph M. Patterson.
- INDIANA.** State inspector of food and drugs, J. N. Hurty (State health officer), Indianapolis.
- IOWA.** Dairy commissioner, H. R. Wright, Des Moines. Deputy commissioner, W. E. Smith, Des Moines. Assistant commissioner, P. H. Kieffer, Des Moines.
- MASSACHUSETTS.** Executive officer of the dairy bureau, the secretary of the State board of agriculture. General agent State dairy bureau, F. M. Harwood, 136 State House, Boston.
- MICHIGAN.** Dairy and food commissioner, A. W. Smith, Lansing. Deputy commissioner, Perley C. Heald.
- MINNESOTA.** State dairy and food commissioner, W. W. P. McConnell, St. Paul. Assistant commissioner, G. L. Dingman.
- MISSOURI.** Ex-officio dairy commissioner, Geo. B. Ellis (secretary State board of agriculture), Columbia.
- NEBRASKA.** Food commissioner, the governor of the State. Deputy commissioner, ————
- NEW JERSEY.** Chief inspector of food and drugs, George W. McGuire, Trenton.
- NEW YORK.** Commissioner of the department of agriculture (including dairy), Charles A. Wieting, Albany. Assistant commissioners, G. L. Flanders, Albany; F. J. H. Kracke, No. 23 Park Row, New York City.
- NORTH DAKOTA.** Ex-officio State dairy commissioner, the State commissioner of agriculture and labor. Assistant dairy and food commissioner, E. E. Kaufman, Fargo.
- OHIO.** Dairy and food commissioner, Horace Ankeney, Columbus.
- OREGON.** Dairy and food commissioner, J. W. Bailey, Portland.
- PENNSYLVANIA.** Dairy and food commissioner of the department of agriculture, B. H. Warren, Harrisburg.
- SOUTH DAKOTA.** Food and dairy commissioner, C. P. Sherwood, Desmet.
- UTAH.** Dairy and food commissioner, Moroni Heiner, Morgan City.
- WASHINGTON.** State dairy and food commissioner, E. A. McDonald, Seattle. Assistant dairy and food commissioner, Dr. James Bullivant, Spokane.
- WISCONSIN.** Dairy and food commissioner, J. Q. Emery, Madison. Assistant commissioner, C. W. Sweeting.

## DAIRY ASSOCIATIONS, 1903.

The chief work of dairy associations is educational, but they also take an interest in all matters pertaining to the industry, especially legislation and the enforcement of dairy laws.

Most of the organizations named below publish the proceedings of their annual meetings. These are sometimes included with the reports of the State departments of agriculture, but are usually issued separately. It is now difficult to obtain full sets of reports of the older associations, which embrace much dairy information of a valuable and practical character. The same is true of reports of the American Dairymen's Association (1866-1880) and the Northwestern Dairymen's Association (1867-1883), which were disbanded when their field of operation had become occupied by the younger associations in the several States.

A considerable part of the expenses of holding conventions and publishing reports is met by membership fees which are generally \$1 per year, and special subscriptions of private individuals, firms, and towns where meetings are held; also by receipts from advertisements inserted in the official programs. But in some States the expenses are largely defrayed by annual grants of the legislatures. From this source the Wisconsin Dairymen's Association receives \$4,000; the Minnesota Dairymen's Association receives \$2,000; the Illinois State Dairymen's Association, \$1,500; the Connecticut Dairymen's Association, \$1,133; the associations in Vermont, Nebraska, and Ohio, \$1,000 each; the Indiana, Maine, and New Hampshire associations receive \$500 each; the Wisconsin Cheese Makers' Association receives \$400; the Michigan Dairymen's Association receives \$300 and the expense of printing the annual reports; the Minnesota State Butter and Cheese Makers' Association receives about \$265, and the Georgia Association, \$25. In Iowa the expense of printing and distributing the proceedings of the annual meetings of the State Dairy Association is borne by the State; in New York and Pennsylvania a part of the expenses of the speakers at the annual meeting are paid by the State; and in Maine some assistance is received through the State commissioner of agriculture.

Prizes, consisting of money and articles useful in the dairy, are frequently offered by the supply trade and others for the best packages of butter and cheese exhibited at the meetings.

Following is a list of all dairy associations whose interests cover any considerable part of a State or larger territory:

**National Association of State Dairy and Food Departments.** Organized 1897. Membership 30. President, J. W. Bailey, Portland, Oreg. Secretary, R. M. Allen, Lexington, Ky. Annual meetings: Portland, Oreg., July 8-10, 1902; St. Paul, Minn., July 21-25, 1903.

**National Creamery Buttermakers' Association.** Organized 1901. Membership 1,500. President, H. J. Nietert, Walker, Iowa. Secretary, E. Sudendorf, Elgin, Ill. Annual meetings: Milwaukee, October 20-24, 1902; October —, 1903.

**National Dairy Union.** Organized 1894. Membership, estimated, 10,000. President, W. D. Hoard, Fort Atkinson, Wis. Secretary, Charles Y. Knight, 154 Lake street, Chicago, Ill. Annual meeting; Milwaukee, October 23, 1902.

**New England Milk Producers' Union.** Organized 1872. Membership over 3,500. President, H. E. Bullard, Holliston, Mass. Secretary, W. A. Hunter, 10 Florence street, Worcester, Mass. Annual meetings: Boston, Mass., January 16, 1903; Boston, Mass., January 14, 1904.

**Five States Milk Producers' Association.** Organized 1898. Membership about 5,000. President, Ira L. Snell, Kenwood, N. Y. Secretary, H. T. Coon, Homer, N. Y. Annual meetings: Binghamton, N. Y., September 2, 1902; Binghamton, N. Y., October 20, 1903.

**CALIFORNIA. California Dairy Association.** Organized 1893.<sup>1</sup> President, Hon. Peter J. Shields, Sacramento. Secretary, Samuel E. Watson, 207 Sacramento street, San Francisco. Annual meeting: Sacramento, 1902.

*Dairymen's Association of Southern California.* Organized 1894. Membership 75. President, C. H. Sessions, 1330 Carroll avenue, Los Angeles. Secretary, Horace G. Hamilton, 211 N. Beaudry avenue, Los Angeles. Annual meetings: Los Angeles, July, 1902; Los Angeles, July 1903.

*California Creamery Operators' Association.* Organized 1901. Membership 127. President, E. H. Zimmerman, Watsonville. Secretary, William H. Saylor, 114 California street, San Francisco. General meetings: December 26-27, 1902.

**CONNECTICUT. Connecticut Dairymen's Association.** Organized 1882.<sup>1</sup> Membership 400. President, E. C. Birge, Westport. Secretary, J. B. Noble, Hartford. Annual meetings: Hartford, January 21-22, 1903; Hartford, third week in January, 1904.

*Connecticut Creamery Association.* Organized 1890. Membership 15. President, E. A. Russell, Suffield. Secretary, E. B. Little, Somers. Annual meeting: Hartford, January 14, 1903.

<sup>1</sup> Incorporated.

- GEORGIA. *Georgia Dairymen's Association*. Organized 1894. Membership about 100. President, W. L. Williamson, Harmony Grove. Secretary, M. L. Duggan, Sparta. Annual meeting: Athens, August, 1903.
- IDAHO. *Dairy and Pure Food Association*. Organized 1900. Membership 35. President, H. T. French, Moscow. Secretary, A. E. Gipson, Caldwell. General meeting: Boise, January 16-17, 1903; January, 1904.
- ILLINOIS. *Illinois State Dairymen's Association*. Organized 1874. Membership 273. President, Joseph Newman, Elgin. Secretary, George Caven, 154 Lake street, Chicago. Annual meetings: Champaign, January 6-8, 1903; January 5, 6, 7, 1904, probably Greenville.
- Chicago Milk Shippers' Union*. Organized 1896.<sup>1</sup> Membership 3,000. President, D. S. Burgess, Salem, Wisconsin. Secretary, H. B. Farmer, 92 La Salle street, Chicago. General meetings: Chicago, February 23, 1903; first week day in March, 1904.
- INDIANA. *Indiana State Dairy Association*. Organized 1891. Membership 100. President, Sam'l Schlosser, Plymouth. Secretary, H. E. Van Norman, Lafayette. Annual meetings: Lafayette, January 21, 23, 1903; third week in December, 1903.
- IOWA. *Iowa State Dairy Association*. Organized 1876.<sup>1</sup> Membership 350. President, S. B. Shilling, Mason City. Secretary, P. H. Kieffer, Strawberry Point. Annual meeting: Cedar Rapids, February 3-5, 1903.
- KANSAS. *Kansas State Dairy Association*. Organized 1888. Membership 150. President, G. H. Littlefield, Parsons. Secretary, T. A. Borman, 505 Polk street, Topeka. Annual meeting: Manhattan, March 3-6, 1903.
- MAINE. *Maine Dairymen's Association*. Organized 1898. Membership 94. President, Rutillus Alden, Winthrop. Secretary, L. W. Dyer, Woodfords. Annual meeting: Waterville, December 3-5, 1902.
- MASSACHUSETTS. *Massachusetts Creamery Association*. Organized 1891. Membership 25. President, Watson N. Wright, Easthampton. Secretary, A. M. Lyman, Montague. Annual meetings: Northampton, December 17, 1902; Northampton, December 16, 1903.
- MICHIGAN. *Michigan Dairymen's Association*. Organized 1885.<sup>1</sup> Membership 136. President, Fred. M. Warner, Farmington. Secretary, S. J. Wilson, Flint. Annual meeting: Agricultural College, February 3-5, 1903.
- Grand Traverse Dairymen's Association*. Organized 1901. Membership 125. President, John F. Miller, Traverse City. Secretary, C. L. Whitney, Traverse City. Annual meeting: Traverse City, March 18, 19, 1903.
- MINNESOTA. *Minnesota State Dairymen's Association*. Organized 1877.<sup>1</sup> Membership 190. President, A. W. Mowbray, St. Charles. Secretary, J. R. Morley, Owatonna. Annual meeting: St. Paul, December 8-10, 1902.
- Minnesota State Butter and Cheese Makers' Association*. Organized 1894.<sup>1</sup> Membership 281. President, Henry Sandholt, Grove City. Secretary, E. R. Slater, Fairmont. Annual meeting: St. Paul, December 11, 12, 1902.
- MISSOURI. *Missouri Dairymen's Association*. Organized 1890. Membership 60. President, W. W. Marple, St. Joseph. Secretary, C. H. Eckles, Columbia. Annual meeting: Columbia, November, 11-13, 1902.
- NEBRASKA. *Nebraska Dairymen's Association*. Organized 1885. Membership 194. President, J. K. Honeywell, Lincoln. Secretary, S. C. Bassett, Gibbon. Annual meeting: Lincoln, January 22-23, 1903.
- NEW HAMPSHIRE. *Granite State Dairymen's Association*. Organized 1884.<sup>1</sup> Membership 43. President, J. L. Gerrish, Contoocook. Secretary, Ivan C. Weld, Durham. Annual meeting: Littleton, December 2-3, 1902.
- NEW JERSEY. *New Jersey State Dairy Union*. Organized 1899. Membership 160. President, Charles Howell Cook, Trenton. Secretary, George L. Gillingham, Moorestown. Annual meeting: Trenton, January 16, 1902.

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<sup>1</sup> Incorporated.

- NEW YORK. *New York State Dairymen's Association*. Organized 1877.<sup>1</sup> Membership 325. President, H. E. Cook, Denmark. Secretary, W. W. Hall, Gouverneur. Annual meetings: Jamestown, December 9-18, 1902; Ogdensburg, December 8-11, 1903.
- NORTH DAKOTA. *North Dakota Dairymen's Association*. Organized 1891. President, F. Lentz, Hebron. Secretary, E. E. Kaufman, Fargo. Annual meeting: Hebron, January 26-27, 1903.
- OHIO. *Ohio State Dairymen's Association*. Organized 1894. Membership 110. President, L. P. Bailey, Tacoma. Secretary, D. A. Crowner, West Jefferson. Annual meeting: Columbus, February 12-13, 1903.
- OREGON. *Oregon Dairymen's Association*. Organized 1892. Membership 84. President, Wm. Schulmerick, Hillsboro. Secretary, F. L. Kent, Corvallis. Annual meetings: Hillsboro, December, 1902; Corvallis, December, 1903.
- PENNSYLVANIA. *Pennsylvania Dairy Union*. Organized 1898.<sup>1</sup> Membership 200. President, Dr. H. P. Armsby, State College. Secretary, Dr. M. E. Conard, West Grove. Annual meeting Harrisburg, December 9-11, 1902.
- Creamery Association of Eastern Pennsylvania and Vicinity*. Reorganized 1896. Membership 75. President, John I. Carter, Chatham. Secretary, George R. Meloney, 1937 Market street, Philadelphia. Annual meeting: Philadelphia, January 3, 1903.
- SOUTH CAROLINA. *South Carolina Dairymen's Association*. Organized 1902. Membership 24. President, C. O. Upton, Clemson College. Secretary, G. M. Davis, Clinton. Annual meeting: Clemson College, August, 1903.
- SOUTH DAKOTA. *South Dakota Dairy and Buttermakers' Association*. Organized 1890. Membership 100. President, Leland Griffin, Desmet. Secretary, C. P. Sherwood, Desmet. Annual meeting: Aberdeen, February 10-11, 1903.
- TEXAS. *Dairy and Live Stock Association*. Organized 1897. Membership 40. President, J. M. Vance, San Antonio. Secretary, J. H. Tom, Georgetown. Annual meeting: College Station, July 7-9, 1903.
- UTAH. *Utah Dairymen's Association*. Organized 1894. Membership 45. President, J. R. Murdock, Charlestown. Secretary, C. Z. Harris, Richmond. Annual meeting: Salt Lake City, April —, 1903.
- VERMONT. *Vermont Dairymen's Association*. Organized 1870. Membership about 530. President, Geo. Aitken, Woodstock. Secretary, F. L. Davis, North Pomfret. Annual meeting: Rutland, January 7-9, 1904.
- WASHINGTON. *Washington State Dairymen's Association*. Organized 1894. Membership 225. President, H. L. Blanchard, Chimacum. Secretary, Mrs. E. Carmichael, Yakima. Annual meeting: Kent, January 14, 15, 16, 1903.
- WISCONSIN. *Wisconsin Dairymen's Association*. Organized 1872. President, J. Q. Emery, Albion. Secretary, George W. Burchard, Fort Atkinson. Annual meetings: Menomonie, February 12-16, 1902; (probably) Fond du Lac, February 11-13, 1903.
- Wisconsin Cheese Makers' Association*. Organized 1893.<sup>1</sup> Membership 300. President, Thomas Johnston, Boaz. Secretary, U. S. Baer, Madison. Annual meetings: Milwaukee, 1903; Milwaukee, first week in January, 1904.
- Wisconsin Buttermakers' Association*. Organized 1901.<sup>1</sup> Membership 242. President, J. G. Moore, Albion. Secretary, F. B. Fulmer, Ettrick. Annual meeting: Waukesha, February 24-26, 1903.

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<sup>1</sup> Incorporated.

## DAIRY INSTRUCTION, 1903.

In the prominent dairy States, and in several others, the State agricultural colleges and some other institutions conduct dairy schools in which they offer short courses in the different branches of dairying. Instruction continues a few weeks, and is given by lectures, laboratory practice, and work in the dairy. It includes the principles of breeding and feeding dairy cattle, practical exercises in testing milk, and the manufacture and care of dairy products; in some cases, also, the pasteurization of milk and a brief study of dairy bacteriology. There are few entrance requirements.

All of the instruction given in the short courses is offered to students taking longer dairy courses and the full college courses in agriculture, and these have opportunity to pursue advanced work and to specialize along lines in which they are most interested.

As a rule all the work in the creamery and cheese factory short courses bears directly upon these industries, while in the farm-dairy courses subjects less closely related to dairying are usually taken.

The names of the institutions at which instruction in dairying is given, the kind and amount of the work, as well as the season when offered, together with the names and addresses of instructors in charge, to whom requests for further information may be sent, are stated below:

ALABAMA. *Alabama Polytechnic Institute.*

College course; dairying, sophomore year, fall term, two hours lectures, and three hours practice per week.

Address: Prof. J. F. Duggar, Auburn.

*Agricultural College for Negroes.*

Creamery and dairy farming by special arrangement.

Address: Prof. G. R. Bridgeforth, Normal.

*Tuskegee Normal and Industrial Institute.*

Regular course; farm dairying, two years; two lectures and two practice periods per week.

Address: Prof. Geo. W. Carver, Tuskegee.

CALIFORNIA. *University of California.*

Dairy school; creamery and cheese making, fall, ten weeks.

College course; senior year, first half, dairying, one lecture and eight hours practice per week.

Two-year course; second year, first half, dairying, one lecture and eight hours practice per week.

Address: Prof. E. W. Major, Berkeley.

COLORADO. *State Agricultural College.*

College course; dairying, sophomore year, fall term, five hours lectures and six hours practice per week; senior year, fall term, five hours lectures, five hours practice per week; spring term, two hours lectures, six hours practice per week.

Address: Prof. C. J. Griffith, Fort Collins.

CONNECTICUT. *Agricultural College.*

Dairy school; two courses, creamery and farm dairy, winter, each twelve weeks.

College course; dairying, senior year, sixty hours lectures, seventy-two hours practice.

Address: Prof. C. L. Beach, Storrs.

DELAWARE. *Delaware College.*

College course; dairying, senior year, winter term, one hour per week.

Address: Prof. W. H. Bishop, Newark.

FLORIDA. *Agricultural College.*

College course; senior year, first term, lectures two hours, practice four hours per week.

Address: Prof. C. M. Conner, Lake City.

*State Normal and Industrial College.*

Regular course; farm dairying.

Address: President N. B. Young, Tallahassee.

GEORGIA. *State College of Agriculture.*

College course; dairying, senior year, two terms.

Short course; dairying and veterinary science, six weeks, ten hours a week.

Address: Prof. J. M. Johnston, Athens.

IDAHO. *College of Agriculture, State University.*

Dairy school; creamery and farm dairy, winter, six to eight weeks.  
College course; dairying, twenty weeks, three hours practice per week.  
Preparatory school; dairying, one year, four hours practice per week.  
Address: Prof. H. T. French, Moscow.

ILLINOIS. *College of Agriculture, University of Illinois.*

College course; dairying, two hours a week, one-half year is required; elective one full year. Electives: Farm dairy, creamery, cheese making, commercial milk, pasteurizing, dairy bacteriology, etc.  
Address: Prof. Wilber J. Fraser, Urbana.

INDIANA. *School of Agriculture, Purdue University.*

Dairy school; creamery, cheese making, farm dairy, winter, ten weeks,  
College course; dairying, freshman year, first half, three hours per week.  
Two-year course; dairying, three hours per week.  
Short course; dairying, twelve weeks, five hours per week.  
Address: Prof. H. E. Van Norman, Lafayette.

IOWA. *State College of Agriculture.*

Dairy school; two courses, butter making, fall, sixteen weeks, cheese making, winter, sixteen weeks.  
College course; dairying, junior year, first term, four hours per week; second term, three hours per week. Senior year, exclusively dairy subjects may be elected.  
Short courses; (1) summer dairy school, sixteen weeks, (2) two-weeks course in starters and cream ripening.  
Address: Prof. G. L. McKay, Ames.

KANSAS. *State Agricultural College.*

Dairy school; two courses, creamery, and farm dairy, each twelve weeks, winter.  
College course; dairying, sophomore year, twelve weeks, five hours lectures, ten hours laboratory per week.  
Short course; dairying, six weeks, five hours lectures, five hours laboratory per week.  
Address: President E. R. Nichols, Manhattan.

KENTUCKY. *State Agricultural and Mechanical College.*

College course; dairying, junior year, winter, ten weeks, one lecture, one hour practice per week.  
Short course; dairying, winter, ten weeks, one lecture, one hour practice per week.  
Address: Prof. C. W. Mathews, Lexington.  
*State Normal and Industrial Institute for Colored Students.*  
Regular course; dairying, theory and practice, for one year.  
Address: Prof. T. J. Garth, Frankfort.

LOUISIANA. *Southern University and Agricultural and Mechanical College*

Regular course; dairying, senior year.  
Address: Prof. Chas. E. Roos, New Orleans.

*State University and Agricultural and Mechanical College.*

College course; dairying, fourth year, second half, one hour per week.  
Address: President Thos. D. Boyd, Baton Rouge.

MAINE. *University of Maine.*

College course; dairying, junior year, spring term, nine weeks, two and one-half hours lectures per week; twelve weeks, seven hours practice per week.  
Short course; dairying, two winters, six weeks, two lectures and four hours practice per day.  
Address: Prof. G. M. Gowell, Orono.

MARYLAND. *State Agricultural College.*

College course; dairying, senior year, second term.  
Two-year course; dairying, first term, one hour lecture, four hours practice per week.  
Short course; winter, ten weeks, dairying forty hours.  
Address: Prof. W. T. L. Taliaferro, College Park.



**MASSACHUSETTS.** *State Agricultural College.*

Dairy school; creamery and farm dairy, winter, ten weeks.

College course; dairying, senior year, thirty-five hours lectures, sixty hours practice.

Address: Prof. Wm. P. Brooks, Amherst.

**MICHIGAN.** *State Agricultural College.*

Dairy school; two winter courses, creamery six weeks, cheese making four weeks.

College course; dairying, sophomore year, three weeks, senior year elective.

Short course; dairy husbandry, winter, six weeks.

Address: Prof. C. D. Smith, Agricultural College.

**MINNESOTA.** *College of Agriculture, University of Minnesota.*

Dairy school; creamery, farm dairy, cheese making, winter, four weeks.

College course; farm dairy, one-half term, two hours per week; students can elect factory course in butter and cheese making, four weeks, two lectures per day, four afternoons per week; also practice.

School of Agriculture; second year, first term, seven hours dairying per week; second term, two and one-half hours per week.

Address: Prof. T. L. Haecker, St. Antony Park.

**MISSISSIPPI.** *State Agricultural College.*

College course; dairying, freshman year, one term, two hours week; sophomore year, one term, five hours week lecture, two hours practice; junior year, one term, nine hours week (one-half lectures, one-half practice); senior year, one term, nine hours week (one-half lectures, one-half practice).

Address: Prof. J. S. Moore, Agricultural College.

*Alcorn Agricultural and Mechanical College.*

Regular course; farm dairying, fourteen weeks.

Address: Prof. J. M. Hicks, Westside.

**MISSOURI.** *College of Agriculture, University of Missouri.*

Dairy school; creamery and cheese making, winter, eight weeks; farm dairy, winter, twelve weeks.

College course; dairying, second year, one term, thirty-four hours lectures, eighty-five hours practice; can elect one hundred hours lectures, four hundred and twenty hours practice.

Short course; dairying, twelve hours lectures, eighteen hours practice.

Address: Prof. C. H. Eckles, Columbia.

*Lincoln Institute for Negroes.*

Regular course; farm dairying.

Address: Prof. G. S. Murray, Jefferson City.

**MONTANA.** *College of Agriculture.*

College course; dairying, senior year, second half, two lectures, two afternoons' practice per week.

Short course; dairying, winter, three months, two lectures, two practice periods per week.

Address: Prof. F. B. Linfield, Bozeman.

**NEBRASKA.** *School of Agriculture, University of Nebraska.*

Dairy school; creamery and farm dairy, winter, nine weeks.

College course; dairying, first year, two hours lectures, four hours practice per week.

Short course; dairying, winter, nine weeks, two hours per week.

Address: Prof. A. L. Haecker, Lincoln.

**NEVADA.** *School of Agriculture, State University.*

Dairy school; creamery, farm dairy and cheese making, winter, three months.

College course; dairying, senior year, second half, three hours lectures, four hours practice per week.

Address: Prof. N. E. Wilson, Reno.

**NEW HAMPSHIRE.** *College of Agriculture and Mechanic Arts.*

Dairy school; creamery, farm dairy, winter, ten weeks.  
College course; dairying, elective junior and senior years.  
Two years agricultural course; dairying, one term, four hours per week.  
Address: Prof. Ivan C. Weld, Durham.

**NEW MEXICO.** *College of Agriculture.*

College course; dairying, senior year, thirty-six hours lectures, forty-eight hours practice.  
Short course; dairying, thirty-six hours lectures, forty-eight hours practice.  
Address: Prof. J. J. Vernon, Mesilla Park.

**NEW YORK.** *College of Agriculture, Cornell University.*

Dairy school; creamery and cheese factory, winter, eleven weeks.  
College course; three hours per week for one year (one-half lectures, one-half practice).  
Short course; dairying, winter, eleven weeks, three lectures and two practice periods per week.  
Special agricultural course; dairying elective.  
Address: Prof. H. H. Wing, Ithaca.

**NORTH CAROLINA.** *State College of Agriculture and Mechanic Arts.*

Dairy school; creamery and farm dairy, winter, ten weeks.  
College course; dairying, first year, winter term, four hours week; senior entire year, three hours week.  
Two-year agricultural course; dairying for winter term, first year, four hours week.  
Winter course in agriculture and dairying, ten weeks.  
Address: Prof. C. W. Burkett, West Raleigh.

*Agricultural College for Colored Students.*

College course; dairying, second year, winter term.  
Address: Prof. H. Bluford, Greensboro.

**NORTH DAKOTA.** *State Agricultural College.*

College course; farm dairying, sophomore year, fall term, sixty hours lectures, seventy-two hours practice.  
Three-year agricultural course; forty hours lectures, forty-eight hours practice.  
Short course; farm dairying, winter, ten weeks, twenty lectures, forty hours practice.  
Address: Prof. E. E. Kaufman, Fargo.

**OHIO.** *State University.*

Dairy school; creamery, cheese factory, farm dairy, winter, ten weeks.  
College course; dairying, one year, four hours per week; elective junior and senior year.  
Two-years course; dairying, second year, four hours per week.  
Address: Prof. John W. Decker, Columbus.

**OKLAHOMA.** *State Agricultural and Mechanical College.*

College course; dairying, junior year, winter term, three hours lectures and four hours practice per week.  
Short course; dairying, nine lectures, eight afternoons practice.  
Address: Prof. John Fields, Stillwater.

**OREGON.** *State Agricultural College.*

Dairy school; creamery and cheese factory, winter, eight weeks.  
College course; dairying, sophomore year, one-half term, five lectures per week; junior year, one term, five hours practice per week.  
Address: Prof. F. L. Kent, Corvallis.

**PENNSYLVANIA.** *School of Agriculture, State College.*

Dairy school; creamery and farm dairy, winter, eight weeks.  
College course; dairying, junior year, two hours lectures per week and one hundred hours practice in summer school. Dairying elective in senior year.  
Address: Prof. Geo. C. Watson, State College.

**SOUTH CAROLINA.** *Clemson Agricultural College.*

College course; dairying, junior year, first term, four hours lectures, four hours practice per week.

Address: Prof. C. O. Upton, Clemson College.

*Colored Normal, Industrial, Agricultural, and Mechanical College.*

Regular course, junior and senior years, farm and dairy work, five hours per week.

Address: Prof. G. C. Williams, Orangeburg.

**SOUTH DAKOTA.** *State Agricultural College.*

Dairy school; creamery, winter, twelve weeks; cheese making, spring, twelve weeks; farm dairy, fall, twelve weeks.

College course; dairying, freshman and sophomore years, fall term.

Address: Prof. A. H. Wheaton, Brookings.

**TENNESSEE.** *University of Tennessee.*

Dairy school; creamery, farm dairy, cheese making, commercial milk, two winters, ten weeks each.

College course; dairying, junior and senior years, four terms.

Address: Prof. A. M. Soule, Knoxville.

**TEXAS.** *State Agricultural and Mechanical College.*

College course; dairying, senior year, winter term, three hours lectures, two and one-half hours practice per week.

Short course; creamery, farm dairy, cheese making, winter ten weeks.

Address: Prof. W. D. Gibbs, College Station.

**UTAH.** *State Agricultural College.*

College course; freshman year, six months, dairying, three lectures and twelve hours practice per week; senior year, second term, dairying three hours per week.

Three-year course; third year, first term, two hours per week.

Short winter course; ten weeks dairying elective.

Address: Prof. R. W. Clark, Logan.

**VERMONT.** *State Agricultural College, University of Vermont.*

Dairy school; creamery and farm dairy, winter, four weeks.

College course; dairying, junior year, winter, four weeks, five hours per week (two-thirds lectures, one-third practice).

Address: Prof. J. L. Hills, Burlington.

**VIRGINIA.** *State Agricultural College.*

College course; dairying, one term, two hours lectures, four hours practice per week.

Short course; one term, two hours lectures, four hours practice per week.

Address: Prof. D. O. Nourse, Blacksburg.

*Hampton Normal and Agricultural Institute.*

Regular course; dairying, boys, twelve periods lectures; girls, ten periods lectures; both, ten periods practice.

Special agricultural course; twenty lectures, twelve weeks practice, three to five hours daily.

Summer course; dairying, six weeks, one hour daily.

Address: Prof. W. S. Sweetser, Hampton.

**WASHINGTON.** *State Agricultural College.*

Dairy school; creamery and cheese factory, winter, eight weeks.

College course; dairying, two-fifths course (two-fifths of nineteen weeks), lectures three-fifths, practice two-fifths.

Address: Prof. E. E. Elliott, Pullman.

**WEST VIRGINIA.** *West Virginia Colored Institute.*

Regular course; junior year, dairying, three months, lectures and practice.

Address: Prof. A. W. Curtis, Institute.

**WISCONSIN.** *College of Agriculture, University of Wisconsin.*

Dairy school; creamery, cheese factory, farm dairy, winter twelve weeks, summer three months; advanced work for second-year students.

College course; dairying elective.

Address: Prof. E. H. Farrington, Madison.

## ASSOCIATIONS OF BREEDERS OF PUREBRED DAIRY CATTLE, 1903.

The interests of the different breeds of dairy cattle are in charge of organizations of breeders which determine purity of breeding, verify pedigrees, register eligible animals, and publish herd books. Some of them record and publish sales and transfers and attested records of dairy performances. They also establish standards of excellence. The details of the work are usually left to the secretary. The names of the various associations and the addresses of the secretaries are as follows:

### *Ayrshire Breeders' Association.*

Secretary, C. M. Winslow, Brandon, Vt.

### *Brown Swiss Breeders' Association.*

Secretary, N. S. Fish, Groton, Conn.

### *American Devon Cattle Club.*

Secretary, L. P. Sisson, Newark, Ohio.

### *Dutch Belted Cattle Association of America.*

Secretary, H. B. Richards, Easton, Pa.

### *American Guernsey Cattle Club.*

Secretary, Wm. H. Caldwell, Peterboro, N. H.

### *Holstein-Friesian Association of America.*

Secretary, F. L. Houghton, Brattleboro, Vt.

### *American Jersey Cattle Club.*

Secretary, J. J. Hemingway, 8 W. Seventeenth street, New York, N. Y.

### *American Polled Durham Breeders' Association.*

Secretary, F. S. Hines, Indianapolis, Ind.

### *The American Polled Jersey Cattle Club.*

Secretary, Charles S. Hatfield, Springfield, Ohio.

### *Red Polled Cattle Club of America.*

Secretary, J. McLain Smith, Dayton, Ohio.

### *American Short Horn Breeders' Association.*

Secretary, John W. Groves, Pedigree Record Building, Chicago, Ill.

## PUREBRED CATTLE OF BREEDS USED FOR DAIRYING.

*Numbers registered, estimates of numbers living in 1903, and values of the latter.*

Breed.	Number registered.	Estimated number living, 1903.	Average value per head.
Ayrshire .....	25,541	8,500	\$100
Brown Swiss .....	3,258	1,800	75
Devon .....	20,717	9,000	75
Dutch Belted .....	1,524	600	200
Guernsey .....	24,337	15,000	140
Holstein-Friesian .....	115,009	75,000	130
Jersey .....	237,680	125,000	100
Polled Durham .....	6,077	5,000	80
Polled Jersey .....	286	250	100
Red Polled .....	30,330	25,000	150
Short Horn <sup>1</sup> .....	564,839	420,000	170

<sup>1</sup> Numbers and average value refer chiefly to beef stock.

## CANADIAN DAIRY OFFICIALS.

DOMINION OF CANADA, DEPARTMENT OF AGRICULTURE, COMMISSIONER'S BRANCH.

JAMES W. ROBERTSON, Ottawa, Ontario,  
Commissioner of Agriculture and Dairying.

J. C. CHAPIS, St. Denis, Quebec,  
Assistant Dairy Commissioner.

J. A. RUDDICK, Ottawa, Ontario,  
Chief of Dairy Division.